

HI 6200 Programmer's Quick Reference Guide

User Guide:

<https://www.hardysolutions.com/Content/Downloads/Manual/e55670df-dbff-4162-8fe8-6f37b6b41573.pdf>

Online Unit:

<http://hi6200.hardysolutions.com/>

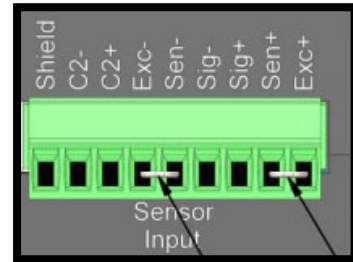
Default IP Address:

192.168.0.100

Units have an internal webserver.

Default Security Password:

1234



LEDs:

LED Color and Status	Description
Steady Green	Instrument is operating normally.
Flashing green	Error, no calibration. Press the on-screen Status button for more information.
Steady red	Read failure or EEPROM write error. Press the on-screen Status button for more information.
Flashing red	Read convert error. Press the on-screen Status button for more information.

Input Table:

[-] HI6200EIP:I	{...}			_0102:Hardy6200Series_F6857DC7:I:0
[-] HI6200EIP:I.ConnectionFaulted	0	Decimal		BOOL
[+] HI6200EIP:I.Command_Echo	0	Decimal		INT
[+] HI6200EIP:I.Command_Status	-31104	Decimal		INT
[+] HI6200EIP:I.Parameter_Value	0	Decimal		DINT
[+] HI6200EIP:I.Parameter_ID	0	Decimal		INT
[+] HI6200EIP:I.Instrument_Status	0	Decimal		INT
[-] HI6200EIP:I.Net_Weight	-3.4	Float		REAL
[-] HI6200EIP:I.Gross_Weight	-3.4	Float		REAL

Output Table:

[-] HI6200EIP:O	{...}		_0102:Hardy6200Series_52E4DDE0:O:0
[+] HI6200EIP:O.Command	0	Decimal	INT
[+] HI6200EIP:O.Aux_Command_Infomati...	0	Decimal	INT
[+] HI6200EIP:O.Parameter_Value	0	Decimal	DINT
[+] HI6200EIP:O.Parameter_ID	0	Decimal	INT
[+] HI6200EIP:O.Reserved_1	0	Decimal	INT
[+] HI6200EIP:O.Reserved_2	0	Decimal	INT
[+] HI6200EIP:O.Reserved_3	0	Decimal	INT
[+] HI6200EIP:O.Reserved_4	0	Decimal	INT
[+] HI6200EIP:O.Reserved_5	0	Decimal	INT

Command List:

Command Number	Command
(0x00)0	Read Parameter
(0x01)1	Zero Cmd
(0x02)2	Tare Cmd
(0x64) 100 dec	Cal Low Cmd
(0x65) 101 dec	Cal High Cmd
(0x66) 102 dec	C2 Cal Cmd
(0x80) 128 dec	IT Test
(0x81) 129 dec	Stability Test
(0x82) 130 dec	IT Test (Reduced Voltage)
(0x83) 131 dec	C2 Search
(0x92) 146 dec	Write INT Value Command (e.g., number of averages to 50)
(0x93) 147 dec	Write FLOAT Value Command (e.g., motion tolerance to 1.5)
(0x94) 148 dec	Set Default Parameters (all parameters except IP addresses)
(0x95) 149 dec	Set Default Network Parameters (IP addresses only)
(0x97) 151 dec	Save Last Good Configuration to Non-volatile Memory
(0x98) 152 dec	Restore Last Good Configuration from Non-volatile Memory

COMMANDS

Hexadecimal (Hex) and Decimal Values:

Commands and statuses are commonly viewed and entered in HEX format.

“0x” and “16#” are both used interchangeably to signify a Hex value.

Hex values increase similar to decimal values, but a **single hex character** can signify a value up to 15.

HEX 0,1,2,3,4,5,6,7,8,9,A,B,C,D,E,F

DECIMAL 0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15

[+] HI6200EIP:O.Command	16#0066	Hex
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EQUAL COMMAND IN HEX AND DECIMAL

[+] HI6200EIP:O.Command	102	Decimal
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Sending Commands:

A C2 Calibrate command through the output table:

[-] HI6200EIP:O	{...}	
+ HI6200EIP:O.Command	16#0066	Hex

COMMAND

Each command entered in the **output** table will be returned as an echo in the **input** table. The command will also have its status returned into the "Command_Status" tag.

Status returns vary. Complete lists of status returns are listed in the User Guide. The status returns for a 0x66 - C2 Calibration command.

C2 CAL CMD	
Hex value: 0x66	
Decimal value: 102	
Write the hexadecimal value 0x66 to the command register to perform a C2 calibration.	
Status Error code 1	Fail
Status Error code 2	ADC Failure
Status Error code 4	Motion
Status Error code 5	no C2 cells
Status Error code 6	C2 capacities not equal
Status Error code 7	Non-Hardy C2 load sensor
Status code FF	cmd in progress

COMMAND STATUSES

A C2 Calibration command being echoed back and status of motion error (04) in the last 2 digits.

[-] HI6200EIP:I	{...}	
- HI6200EIP:I.ConnectionFaulted	0	Decimal
+ HI6200EIP:I.Command_Echo	16#0066	Hex
+ HI6200EIP:I.Command_Status	16#2704	Hex

COMMAND ECHO

Motion Tolerance:

Motion (04) is a normal error code upon new installations or a change of load cell. The Motion Tolerance parameter may require an initial and final adjustment. The motion tolerance operates on 1 second intervals. If the weight value changes by X units within 1 second, then the scale is placed into a motion state.

[-] HI6200EIP:I	{...}	
- HI6200EIP:I.ConnectionFaulted	0	Decimal
+ HI6200EIP:I.Command_Echo	16#0066	Hex
+ HI6200EIP:I.Command_Status	16#2704	Hex

CYCLIC UPDATE COUNTER

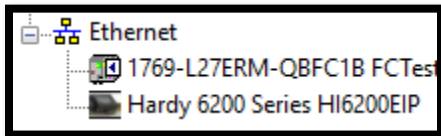
The 2 values on the left of the command status are an update counter. They increment from 0 to FF in HEX.

Changing Parameters:

Parameters can be changed with the display, the built-in webpage, the AOP, with a Module Reconfigure message or individually with a Write command.

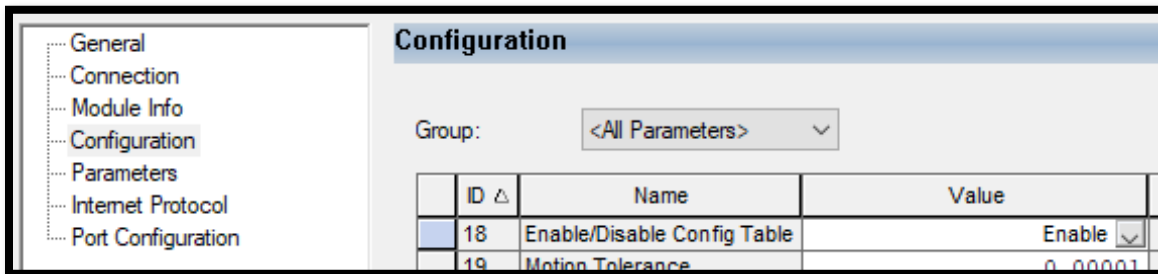
The AOP method:

The AOP can be accessed by double clicking on the unit in the controller organizer of the program.



This is known as the "AOP". Sometimes referred to as the EDS AOP.

The Enable/Disable Config Table must be set to "Enable" to use the AOP or Configuration table to set the parameters.



AOP

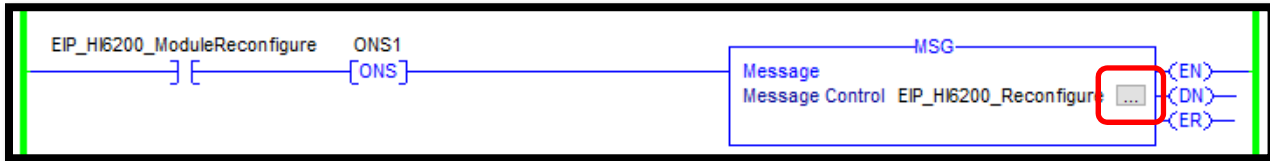
Writing Parameters with a Module Reconfigure message:

Parameters can be changed in the "C" (Configuration) table and a "Module Reconfigure" MSG instruction can be used to write these parameters to the unit.

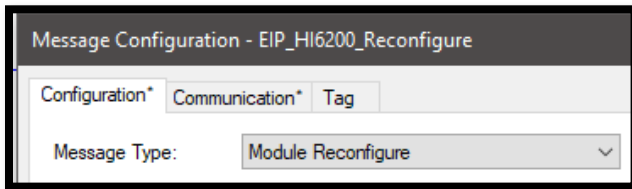
Parameter Name	ID	Format	Unit
HI6200EIP:C.Enable_Disable_Config...	1	Decimal	INT
HI6200EIP:C.Decimal_Point	5	Decimal	SINT
HI6200EIP:C.Grads	0	Decimal	SINT
HI6200EIP:C.Unit	1	Decimal	SINT
HI6200EIP:C.WAVERSAVER	3	Decimal	SINT
HI6200EIP:C.Num_Averages	10	Decimal	INT
HI6200EIP:C.Loadcell_Sensitivity	4	Decimal	INT
HI6200EIP:C.AutoZero	0	Decimal	INT
HI6200EIP:C.AutoZero_Tolerance	10.0	Float	REAL
HI6200EIP:C.Gravity_Correction	1.001159	Float	REAL
HI6200EIP:C.Motion_Tolerance	0.00001	Float	REAL
HI6200EIP:C.Zero_Tolerance	10.0	Float	REAL
HI6200EIP:C.Tare_Weight	0.0	Float	REAL
HI6200EIP:C.Ref_Weight	0.0	Float	REAL
HI6200EIP:C.Span_Weight	1000.0	Float	REAL
HI6200EIP:C.Scale_Capacity	1000.0	Float	REAL

CONFIGURATION TABLE

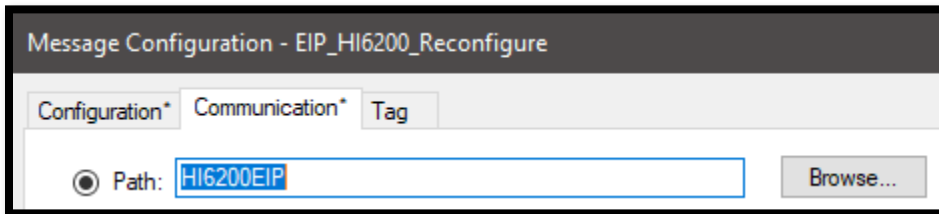
Click the "..." button to enter the properties of the message.



The Configuration tab of the message instruction.
 Choose Module Reconfigure.



The Communication tab of the message instruction.
 Click "Browse..." to browse and select the HI6200.



Writing Parameters with a Write Command:

A command of "16#0092" is the write integer command to write an integer value.

A command of "16#0093" is the write float command to write a float value.

Note: Float values must be converted to DINT values before being written.

Example: Writing a value of 75 to the number of averages parameter. (16#2082)

In the **output** table, the command of 92 is set along with the parameter ID and parameter value.

[-] HI6200EIP:O	{...}		_0102:Hardy6200Series_52E4DDE0:O:0
[+] HI6200EIP:O.Command	16#0092	Hex	INT
[+] HI6200EIP:O.Aux_Command_Informati...	0	Decimal	INT
[+] HI6200EIP:O.Parameter_Value	75	Decimal	DINT
[+] HI6200EIP:O.Parameter_ID	16#2082	Hex	INT

WRITING A PARAMETER

In the **input** table, the command, parameter and value will be returned.

[-] HI6200EIP:I	{...}		_0102:Hardy6200Series_F6857DC7:I:0
[-] HI6200EIP:I.ConnectionFaulted	0	Decimal	BOOL
[+] HI6200EIP:I.Command_Echo	16#0092	Hex	INT
[+] HI6200EIP:I.Command_Status	16#c200	Hex	INT
[+] HI6200EIP:I.Parameter_Value	75	Decimal	DINT
[+] HI6200EIP:I.Parameter_ID	16#2082	Hex	INT

THE WRITE PARAMETER ECHO

Reading Parameters Manually:

The parameter IDs are located in the manual.

APPENDIX B - LIST OF PARAMETER IDS

B.1 Read/Write Parameters

Parameter	Hex Value
Units	0x2881
Waversaver	0x2081
NumAverages	0x2082
ZeroTolerance	0x2886
AutoZeroTolerance	0x6302

PARAMETER IDS

Example: A read parameter command to read the number of averages.

In the output table, the command is set to "0" and the parameter ID is set to 16#2082

[+] HI6200EIP:O.Command	16#0000	Hex
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[+] HI6200EIP:O.Parameter_ID	16#2082	Hex
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READING A PARAMETER

In the **input** table, the command will echo and the Parameter Value will appear.

[+] HI6200EIP:I.Command_Echo	16#0000	Hex
[+] HI6200EIP:I.Command_Status	16#4400	Hex
[+] HI6200EIP:I.Parameter_Value	10	Decimal
[+] HI6200EIP:I.Parameter_ID	16#2082	Hex

THE READ PARAMETER ECHO

Known Good Configuration:

The unit can save a known good configuration to memory by using the webserver.

Configuration > Diagnostics > Parameters



KNOWN GOOD CONFIGURATION

Login without IP and Security Code:

If the unit display is secured and the IP address is unknown, the "info" button on the display's password screen will display the IP address to allow access via the internal webserver.